

**Fig. 1**  
(SEQ ID NO: 1)

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-9  cggtgagaagaatgggtgatttttaaatctcatgtcaataaccaatgtcccggtgctgaag
      M V Y F L N F M S I T N V P V L K
52  cgcgcgcgactctacatggcgagaatcgccggctgggtggtgttcttggtgctgctg
      R A R L Y M A T N R R L V V V L V V L L
112 tactgggtggtccagaacgtttggacgtggagccctgggacgcgcatttggccaagt
      Y W V V Q N V W T W S P G T R D L A Q V
172 gacgcgaagatcgaggccgagctaaactcgaatctacatacttttgagcgcatttgcgc
      D A K I E A E L N S N L H T F G A H L R
232 cacttaaacggcttcgcggcagagtcggccacctgcgtgaaaaactcacccttctatttc
      H L N R L P A E S A T L R E K L T F Y F
282 ccataattatctgaaaagcccggtgcgaaccagatctggcagacatggaaggtcgatctc
      P Y Y P E K P V P N Q I W Q T W K V D L
352 gaagacgacaacttccccaagcagtagacagcggttcagaagacgtgggtcgagaaaaat
      E D D N F P K Q Y R R F Q K T W V E K N
412 ccagactcgtgtaccacctgattccggactctgtgattgaggactttgtggcagatttg
      P D Y V Y H L I P D S V I E D F V A S L
472 tacgcgaacgtgccggaggtgggtcagagcgtaccagctgcttccgaaaaatatcatgaag
      Y A N V P E V V R A Y Q L L P K N I M K
532 gcggatttttccggtatttggtgatctacgcgcggaggccactactcagacatggac
      A D F F R Y L V I Y A R G G T Y S D M D
592 acggtgtgtttaagccgatcaaggactgggccacgtttgatcgacacgtgatccacgct
      T V C L K P I K D W A T F D R D L I H A
652 gccgacaataaggccgatctctcccgagatagatccagaagcagaaccacgcctgtgggg
      A D N K A D L S Q I D P E A R T T P V G
712 ctggtgattgcataggccgacccggacaggccgactggcacagtggttctcgcgc
      L V I G I E A D P D R P D W H E W F S R
772 agactgcagttctgcagtggaagatccaggcgaagcgggacaccccgctgctgcgcgag
      R L Q F C Q W T I Q A K P G H P L L R E
832 ctgatcatccggaatcggtggaggagagcttccgcaaacagcacatgggcgttttgaaaaa
      L I I R I V E E T F R K Q H M G V L K R
892 gtggaaggcaaggactcgggcgcagatatcatgcagtggaaggacggggatattaca
      V E G K D S G A D I M Q W T G P G I F T
952 gacactctgtttgattatctgaacaatgtggcgagcgaaggcaagtgggcgacgggtac
      D T L F D Y L N N V A S D G K L G D G Y
1012 ggcgtggggtcggtgtattggcgcaagcacgcgcaaatataagctgaaaaagacagaatt
      G V G S L Y W R K H G K Y K L K K T E I
1072 aacaagaataacgacccattgcattctgaggaccagcttataactggaggctcgctgacc
      N K N N E P L H S E D Q L I N W R S L T
1132 aacatggacaagcccaagatcatgggggacgttaatggtgttaccatcacgacgttagt
      N M D K P K I M G D V M V L P I T S F S
1192 ccgaacgtggggcacaagggtcgaagagcagctcagataggctggcattttgtggagcat
      P N V G H M G S K S S S D R L A F V E H
1252 ttattttctggcagctggaagccaaaaaataaggaaaaataataatagctgcatt
      L F S G S W K P K N K -
1312 ttagataattctcatgagcaggcacagaacg

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Fig. 2

SEQ ID NO.:

Hp0ch2p	1	-----HVYFLNFMSTINVPVLKRAVTHATNRLPVVVLVYVW	2	
Hp0ch1p	1	-----MSKASPYGINSSTSSTSPPFKLSLSPCLL	15	
Ca0ch1p	1	-----MLQLRPNQWVHSHKLAVLGIWVITFTFSS	16	
Pp0ch1p	1	-----MAKADCLTYTNFPMPPRYFTFAIPA	17	
Sc0ch1p	1	-----MSKMLHATPKSTIWTWVYSL	18	
Sp0ch1p	1	-----MLRLPLRSIVIGAAIAGSILLFNHGSIRGREDLTSMLDYVPAANKNDVQCQREELSYDQ	19	
Hp0ch2p	42	QNTWTS PCTPD LAQVDARKLAEKLV-----SNLHTFGALR-----HINPLPAESATLRLNRYFF	2	
Hp0ch1p	32	GLSLPFSTSWISINTEDKIVSYTN-----NFYKLMDFRC-----ANPYDAAVTALAKRFF	15	
Ca0ch1p	35	SPTSTHKTIVYSPKQLAFLEKLV-----SNWRELGNFQF-----MKYSLPD ESTLQQLQVQFF	16	
Pp0ch1p	30	VNVCVLYCPGSQLSSPSDYPLTL-----PSLDLRLTLEAP-----SOLSPGTVDMLHQLQLHFF	17	
Sc0ch1p	29	FHLNKRLLSLFTPSKDDFKVTLPLTSHSGDINLHROI-----TVNKGQNLHMLHQLQLHFF	18	
Sp0ch1p	67	YSEEDPDLEAYLSDHPEELHSLLELDENNYLHLRYFSQLQDPEKNEAVHNRVDSREH	19	
Hp0ch2p	100	Y-PEEENQVQWQTKVDLEDDNFKQNRQFQVAV-EMDPVWVHLDPQVIEDASLHIAN-VPFV	2	
Hp0ch1p	87	DASA-SSEKSIWQWKPSTQPDFFPELVNHNNE-----NPPVCMNLTDEILEPRLREDT-VPFV	15	
Ca0ch1p	94	D-ESSEPPHNIWQTKRWGIDKSPFRRLKQQLD-D-NDPVRVY-PPKQCDLSEQLSQ-VPFV	16	
Pp0ch1p	88	R-SYEPHNIWQTKRWSPSSSPFNEDLGEVLQSSPMYDFPPDAADAEVSHHIER-VPFV	17	
Sc0ch1p	91	R-SOAPHNIWQTKRWGADKRVSSATQKQSGSYSPVQVYSSEPTTIPENHAP-VPFV	18	
Sp0ch1p	137	P-YHADPGLNLSHSDP-----SDNVRHTRFMR-INHSHSHADLNGSKALISSGDSSSSGS	19	
Hp0ch2p	166	PVLLPQKMLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	2	
Hp0ch1p	153	PAVSLPHNLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	15	
Ca0ch1p	160	PAVSLPHNLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	16	
Pp0ch1p	154	PAVSLPHNLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	17	
Sc0ch1p	158	PAVSLPHNLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	18	
Sp0ch1p	200	QVAVSLPQLKADPEVYLHARGCYVADDTLQKTPQVAFDRILTHAADNK-----ADLSQI	19	
Hp0ch2p	228	DEEARTIPVGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	2	
Hp0ch1p	204	WVWVLEEDVWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	15	
Ca0ch1p	214	RSGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	16	
Pp0ch1p	208	NAGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	17	
Sc0ch1p	228	SSDEISHQVGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	18	
Sp0ch1p	251	IPVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	19	
Hp0ch2p	289	SGMGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	2	
Hp0ch1p	258	DKLOVYDPPFQDQ-CASVDIVVQVGVATDILAHNSPSPITVDI	15	
Ca0ch1p	268	SGMGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	16	
Pp0ch1p	262	SGMGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	17	
Sc0ch1p	298	SEMIDPRFERDYNVYHNSPDETYHSELEAKNVLDSDIVVQVGVATDILAHNSPSPITVDI	18	
Sp0ch1p	304	LHDSEGLSNGS-----NAGLVIGLEADPDQWVWYARRIQFCQVITQAKPCHPILRLILATITLSTP	19	
Hp0ch2p	331	---CRG---GDGYGVCGLYVRFHCKYKIKETINRNNPELHSED-----QVWVSLNLPKPPGQVVL	2	
Hp0ch1p	307	DHQDQVAGELYC-----PETCEGDSGSPFACHPAPVDDVNY	15	
Ca0ch1p	310	---PRFKNKK---W-----ATSDGLFPGCQVADPVVL	16	
Pp0ch1p	314	---GHSGQICACSAAYNALSLERDALSAPNFCMLKRVPGYTAQVLDLSDPNSPQVADPVVL	17	
Sc0ch1p	368	LINPVPNKNDKEKSESATTPARDVMDTLKSTPKFYKISLSLOSNSLPNPFEPFQVQVADPVVL	18	
Sp0ch1p	341	-----PVSIVLQVSGVADPVVL	19	
Hp0ch2p	392	PIESFSDMGVHGSSESTLADVLLGCSWPKPKK	2	
Hp0ch1p	348	PAHSPKPKK-----ENKQCTQVYHSGSWWPKKIKPKCHGYKCDPMEVELKQVSKADVIP	15	
Ca0ch1p	344	PIESFSDMGVHGSSESTLADVLLGCSWPKPKK	16	
Pp0ch1p	371	PIESFSDMGVHGSSESTLADVLLGCSWPKPKK	17	
Sc0ch1p	438	PIESFSDMGVHGSSESTLADVLLGCSWPKPKK	18	
Sp0ch1p	362	QVYHSGSWWPKKPKK-----PVSIVLQVSGVADPVVL	19	
Hp0ch2p		100%	2	
Hp0ch1p	413	GESKDAPVVKFLAKRCAYFTYF	27.3%	15
Ca0ch1p		42.3%	16	
Pp0ch1p		40.0%	17	
Sc0ch1p		40.4%	18	
Sp0ch1p		30.8%	19	